US Army Corps
of Engineers

Engineering and Construction

Briefing for SAD LDP Class

18 March 2005

M.K. Miles, P.E., PLS

US Army Corps
of Engineers

Topics

- Mission
- Organization
- E&C Communities of Practice
- E&C Plan of Improvement
- Wrap-Up / Questions & Comments

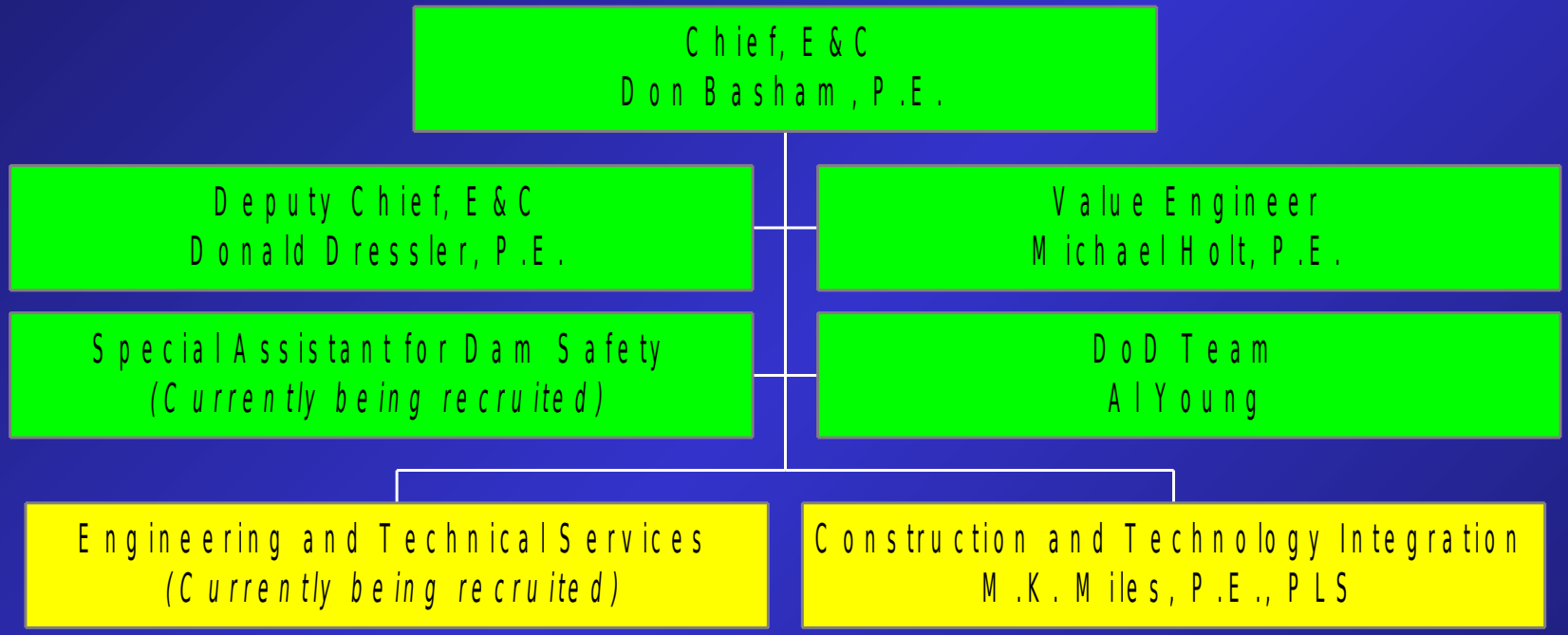
US Army Corps of Engineers

E & C Mission
2012 Focus

- Provide E&C Support to Civil Works, Military Programs, RITs, R & D, and other HQ elements
- National Relationships
- National Policy Development
- Capable E&C Workforce
- Oversight of National Programs

US Army Corps of Engineers

HQ E&C Organization



- Geotechnical Team
- Hydrology, Hydraulics and Coastal Team
- Structures Team
- Electrical - Mechanical Team

- Construction Management Team
- Cost Engineering Team
- Architecture Team
- IT Systems Team

US Army Corps of Engineers

E & C

Communities of Practice

- Architecture
- CADD (multi-discipline)
- Civil Engineering
- Construction Management
- Cost Engineering
- Electrical & Electronic
- Engineering Management
- Geospatial
- Geotechnical and Materials
- HH&C
- Mechanical
- Fire Protection
- Security Engineering
- Structural
- Value Engineering
- Dam Safety
- Specifications

- **E&C encompasses about 1/3 of USACE employees**

US Army Corps of Engineers

E & C
Plan of Improvement

- Technology Integration (CESWD)
- Capable/Competent Workforce (CEPOD)
- Align for Success (CENWD)
- Processes and Procedures (CELRD)
- Policy, Guidance and Criteria (CEMVD)
- Professional Relationships (CESAD)
- Metrics (CECW-CE)

US Army Corps of Engineers

E & C

Plan of Improvement – Key Initiatives

Science and Engineering Technology (SET) is a corporate initiative to allow USACE to establish **common S&E policies, practices, and tools** across Regional Business Centers via Communities of Practice. The ultimate goal is to ensure the **continued technical excellence** of the Corps.

US Army Corps of Engineers

E & C

Plan of Improvement – Key Initiatives

The **Technical Excellence Network (TEN)** is a web-accessed relational database that contains data on subject areas of interest to Communities of Practice (COPs). TEN provides **one door to information and knowledge** for CoPs.

US Army Corps of Engineers

E & C
Plan of Improvement – Key Initiatives

- **Building Information Model (BIM) Initiative**
  - Use of 3-D Object-oriented models for planning, design, and operation of projects
  - Interoperability and life-cycle data sharing key objectives
    - NIST study identified lack of interoperability costs nation $15.8B annually
  - CADD-GIS Center working with other Federal Agencies to develop implementation strategy

US Army Corps of Engineers

E & C
Plan of Improvement – Key Initiatives

- **Standardization**
  - Watershed Management / eGIS / GIS Standards letter signed by MG Griffin, dated 2 July 2004
  - CADD Standards letter signed by Don Basham, dated 23 July 2004
  - Standardization of software tools desired
    - SET Software Inventory underway
  - Centers of Standardization
  - Standard Processes and Procedures

US Army Corps of Engineers

E & C
Plan of Improvement – Key Initiatives

- **Development of Risk Management Tools**
  - Major Rehab
  - Dam Safety
  - Project Security
  - Seismic Analysis

US Army Corps
of Engineers

E & C
Wrap-Up

QUESTIONS / COMMENTS